REMARKS

Claims 1-34 are pending and stand rejected thereto in the instant application. No claims have been amended, cancelled, or added, leaving claims 1-34 for consideration upon entry of this amendment.

Applicants acknowledge the Examiner's consideration of Applicants' cited references on Form PTO-1449. It is respectfully submitted that it was not the Applicants' intent to "bury" pertinent prior art references in a "mountain of largely irrelevant [material]" as suggested by the Examiner. Applicants submission is merely in attempt to comply with Applicants' duty of disclosure.

Claim Rejections - 35 USC § 102

Claims 1, 13, 25 and 30 stand rejected under 35 U.S.C. §102(b) as being anticipated by Leone et al. (5,490,086) or Murphy (4,958,252). Applicants respectfully traverse.

The Examiner suggests that Leone disclose an electrical trip unit (Fig.6, Pos. 14) having a microprocessor (15) to identify an ID number from a module plug (16A) having a display (Fig.5, Pos. 28) and operator interface (30) and access to one of the programs to control the module plug (Col. 3, Lines 9-30). "Memory 36 may take the form of dip switches, a set of jumpers (presently preferred embodiment), PROM or other types of ROM" (Col.3, Lines 12-14).

Applicants respectfully submit that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, ***in a single prior art reference.***" *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the *** claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The embodiment that the Examiner asserts above, in reference to Leone in

Figures 5 and 6 with respect to Col. 3, lines 9-30, is more accurately described in Leone as a plug-in ground fault **monitor** module for a circuit breaker trip unit configured to operate with a plurality of different plug-in modules. The ground fault monitor module includes a memory which stores data representative of its particular function. This memory is readable by the trip unit and enables the trip unit to automatically adapt to communicate monitored ground fault data to the ground fault module. See Abstract. More specifically, display unit (module) 16 may have a plurality of configurations, and, generally, includes a multi-digit display 28, a multi-position switch 30, a connector 32, and a memory 36 for storing configuration data (address). Memory 36 may take the form of dip switches, a set of jumpers (presently preferred embodiment), PROM or other types of ROM. Col. 3, lines 9-14. When unit 14 is operating, and coupled to unit 16, unit 14 reads the data in memory 36 (e.g. 4 bits, one associated with each of 4 jumpers 46, 48, 50 and 52) to determine the configuration of unit 16. Col. 3, lines 19-23. Upon recognizing the unit 16 configuration, processor 20 operates under the control of the portion of the program stored in unit 14 associated with the particular configuration. For example, one unit 16 may be programmed to display amperage, where each switch 30 setting is associated with different amperage readings while other units may be configured to display a circuit breaker variable such as temperature, power or energy use. Col. 3, lines 27-34. Furthermore, Leone does not teach a rating plug of any kind as defined in Applicants' originally filed specification, and thus, does not disclose a digital rejection scheme for a rating plug.

Leone is absent any teaching or suggestion of **a rating plug** releasably engaged with said microprocessor, said rating plug **includes an identification register**; wherein said ***microprocessor reads said identification register***, said identification register **including an identification number**; wherein said ***microprocessor accesses one of a plurality of programs in said nonvolatile memory based on said identification number***; and wherein said one of a plurality of programs **instructs said microprocessor** to perform a **validation of said rating plug *for operation with said microprocessor***, as in claims 1 and 13, and similarly claimed in claims 25 and 30.

In particular with respect to claim 25, Leone does not teach or suggest, **identifying a rating plug** releasably engaged with the electronic trip unit and in

operable communication with [said] microprocessor; **determining a program associated with said rating plug**; and executing said program, **said program performs a *validation of said rating plug***. Likewise, with respect to claim 30, Leone does not teach or suggest, **a rating plug** releasably engaged with said microprocessor; and wherein said **microprocessor includes: means for identifying said rating plug, means for determining a program associated with said rating plug**, and means for executing said program, said ***program performs a validation of said rating plug***. Thus, claims 1, 13, 25, and 30, including claims depending therefrom, i.e., claims 2-12, 14-24, 26-29, and 31-34, define over Leone.

The Examiner further suggests that Murphy discloses a circuit breaker including a trip unit (Fig.1, Pos. 5), a microprocessor (Fig.2, Pos. 27), trip mechanism (25), controlled by the microprocessor and a rating plug (7) releasably inserted into the trip unit.

The Examiner inaccurately alleges that an EEPROM (55) provides the microprocessor (27) with maximum rated current, frame rate and other data, which are set by rating plug and that the microprocessor invokes the program according to the data, received from EEPROM through DO (Pin 10), evaluates received data and controls the trip mechanism. More accurately, Murphy discloses that rating plug 7 includes 3 precision resistors 43, 45 and 47, which are connected to the common ground and through pins 4, 5 and 6, respectively, to the microcomputer based trip unit 27. The resistor 43 provides a reference for the microcomputer for the frame rating of the circuit breaker. The resistor 45 establishes the current rating of the circuit breaker by providing a reference to the microcomputer for the maximum continuous current. The value of this resistor is selectable to set the desired current rating. Col. 4, lines 4-13.

However, the Examiner correctly states that the EEPROM memory includes four registers (Fiq.3) storing service data on the circuit breaker. "The first register (57) records the style or model of the circuit breaker. The second register (59) records the serial number of the breaker. Register (61) records the trip history of the circuit breaker, which is the number of trips weighted by a function of the current interrupted by each trip. Finally, the register (63) records the number of operations of the operating

mechanism of the circuit breaker" (Col.5, Lines 6-15).

More specifically, it is respectfully submitted that Murphy teaches a removable rating plug which provides a reference for the current rating of the breaker that also has an EEPROM to which the microcomputer of the circuit breaker writes for storage. See Abstract. In fact, the only "identification" that is written into the EEPROM is the style and serial number of the circuit breaker, not the rating plug itself. See Abstract.

The EEPROM memory includes four registers storing service data on the circuit breaker. The first register 57 records the style or model of the circuit breaker. The second register 59 records the serial number of the breaker. Register 61 records the trip history of the circuit breaker which is the number of trips weighted by a function of the current interrupted by each trip. Finally, the register 63 records the number of operations of the operating mechanism of the circuit breaker. The trip history and the number of the operations of the operating mechanism are written into the registers 61 and 63 by the microcomputer. The style or model number and the serial number in registers 57 and 59 is entered by a separate [portable programmer] device. Col. 5, lines 6-19. In this manner, service data relevant to the number of mechanical operations of the circuit breaker and the trip history based upon the magnitude of currents interrupted is continually generated and stored in the EEPROM 55 in the removable rating plug 7. Col. 5, lines 55-59.

When desired, the rating plug 7 may be removed from the trip unit 5 of the circuit breaker and plugged into a reader such as the portable programmer device 83 shown in FIG. 5. The programmer 83 includes a receptacle 85 into which the rating plug 7 is inserted. The programmer 83 performs several functions. It reads the style number, serial number, number of operations and trip history from the EEPROM 55 in the rating plug 7, writes the style number and serial number into the EEPROM, and after recording of the number of operations and trip history, **clears those registers**. Col. 5, line 60 – Col. 6, line 2. Accordingly, there is no identification register with a identification number of the rating plug ever present, such that the microcomputer or microprocessor can validate use of the rating plug with that particular microcomputer.

On the contrary, when a new plug is being prepared for a circuit breaker, it is first inserted into the receptacle 85 in the programmer 83 and the style number and serial

number f the circuit breaker are entered through the keyboard 91. The rating plug is then removed from the programmer 83, and inserted into the trip unit 5 of the circuit breaker 1 so that the microcomputer based trip unit 27 of the circuit breaker then periodically enters (write) the number of operations of the circuit breaker and the trip history into the appropriate registers in the EEPROM 55 of the rating plug 7. Col. 6, lines15-26.

Thus, Murphy is absent any teaching or suggestion of a rating plug releasably engaged with said microprocessor, said rating plug **includes an identification register**; wherein said ***microprocessor reads said identification register***, said identification register **including an identification number**; wherein said ***microprocessor accesses one of a plurality of programs in said nonvolatile memory based on said identification number***; and wherein said one of a plurality of programs **instructs said microprocessor** to perform a **validation of said rating plug *for operation with said microprocessor***, as in claims 1 and 13, and similarly claimed in claims 25 and 30.

In particular with respect to claim 25, Murphy does not teach or suggest, **identifying a rating plug** releasably engaged with the electronic trip unit and in operable communication with [said] microprocessor; **determining a program associated with said rating plug**; and executing said program, **said program performs a *validation of said rating plug***. Likewise, with respect to claim 30, Murphy does not teach or suggest, wherein said **microprocessor includes: means for *identifying* said rating plug, means for determining a program associated with said rating plug**, and means for executing said program, said ***program performs a validation of said rating plug***. Thus, claims 1, 13, 25, and 30, including claims depending therefrom, i.e., claims 2-12, 14-24, 26-29, and 31-34, define over Leone.

Claim Rejections - 35 USC § 103

Claims 2-12, 14-24, 26-29 and 31-34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Murphy (4,958,252). Applicants respectfully traverse.

The Examiner alleges that Murphy discloses a circuit breaker with a removable rating plug and that the breaker includes a microprocessor (Fig. 2, pos. 27) for controlling

a trip mechanism (25) of the breaker and a rating plug (7), containing the information about the plug in its EEPROM (memory) as well as in the value of precision resistors (43, 45 and 47). The Examiner further states that it is well known in the art and obvious for an ordinary skilled artisan to use different kinds of memory (ROM, NVROM, RAM) and programs to compare and evaluate data from registers of EEPROM, containing characteristics of a plug with appropriate value and send a signal to trip mechanism. The Examiner still further concludes that it is also obvious to use LAN or WWW instead of local programmer device, because it will enable implementation of central control and monitoring system.

As discussed above, it is respectfully submitted that Murphy does not contain the information about the rating plug in its EEPROM (memory) as well as the value of precision resistors (43, 45 and 47). Furthermore, it is respectfully submitted that Murphy teaches away from storing any information about the rating plug in EEPROM, as the only identification stored therein is style and serial number of the circuit breaker entered by a keyboard, not written to by the microprocessor. The microprocessor merely writes service data to the EEPROM. Murphy is absent any teaching or suggestion of identifying a rating plug to be read by the microprocessor, nor a digital rejection (or validation) scheme for the same.

Moreover, it is respectfully noted that use of different kinds of memory and/or programs to compare and evaluate data with respect to a rating plug does not cure the deficiencies noted above with respect to Murphy. Likewise, use of a LAN or WWW instead of a local programmer device does not cure the noted deficiencies.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596,

1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

As explained above, none of the cited references teach or suggest that the microprocessor of the electronic trip unit [digitally] validates a removable rating plug using an identification number stored in a corresponding register in EEPROM associated with the rating plug that is readable by the microprocessor.

Thus, it is respectfully requested that the rejections with respect to claims 2-12, 14-24, 26-29 and 31-34 be withdrawn.

Claim Rejections Double Patenting

Claims 1, 13, 25 and 30 stand provisionally rejected based on the judicially created doctrine of obviousness-type double patenting. Applicants acknowledge the Examiners observation and respectfully suggest that the rejection will become moot with prosecution and amendment of the claims in either or both applications. Applicants will submit a terminal disclaimer with respect to the rejected claims if necessary in due course.

Conclusion

Applicants respectfully submit that all outstanding have been addressed and the present application is in condition for allowance. Reconsideration and allowance thereof is most earnestly and respectfully requested. Should any issue remain outstanding, Applicants respectfully request the Examiner telephone the undersigned at the number below to quickly resolve any such issues.

Applicants have submitted herewith a fee transmittal to cover the additional cost of the additional independent claim introduced by this amendment. However, should any additional fee be due for continued examination, Applicants respectfully request that such fee be withdrawn from Deposit Account 06-1130 maintained by Applicants' attorneys.

Respectfully submitted,
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